

4. INTERNETWORK AVAILABILITY

4.1 Availability Objectives

The availability objectives and data presented herein are preliminary. Further refinement to the analysis is pending the awarding of the network element RFP and refinement of the availability data for the underlying MITNET service. The current availability is based upon an assumption of a 24 hour MTTR for remote sites which will also be reviewed pending the awarding of the Network Element RFP. Note that the **OBJECTIVES DO NOT INCORPORATE THE AVAILABILITY OF END SYSTEMS** (eg. file servers, user workstations).

- a. Availability is defined with respect to a user of the internetwork services where a user may be a person or process. The SIGNET service is defined to be unavailable when any user cannot access any desired resource anywhere in SIGNET. The SIGNET Internetwork Service is defined to be unavailable when the outage to the user is due to an outage in the internetwork and not by an outage in the end systems involved in the desired service.
- b. The SIGNET Internetwork Service Availability objective is separated into two components:
 - 1) The two end systems are within the same local subnetwork environment with no traversal of the wide area subnetwork required.
 - 2) The two end systems are in different local subnetworks and a traversal of the wide area subnetwork is required.
- c. The accuracy of the following availability analysis is, of course, dependent upon accurate estimations of the reliability of the various components of SIGNET including devices, such as concentrators and routers, as well as services, such as MITNET and power. The numbers presented in this version are based upon estimates, founded in experience with other networks, and data provided by MITNET personnel for the underlying MITNET services. The Network Element Request for Proposal requires bidders to provide reliability data for the products bid. **The SIGNET Internetwork Availability analysis will be refined using vendor provided reliability data upon awarding of the network element contract.**
- d. The SIGNET Internetwork Service availability objective is:
 - 1) Overall: 97.5%
 - 2) Local Subnetwork Traversal Only 97.8%
 - 3) Wide Area Subnetwork Traversal 96.5%

END SYSTEMS NOT INCLUDED

The objective is established by considering realistic values for component reliability, input on the expected availability of the wide area subnetwork service, and the complexity of the network. The availability objective has been established in the absence of input requirements from the user community.